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EXAMINER	
WANG, RONGFA PHILIP	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/709,705	WEEDON ET AL.	
	Examiner	Art Unit	
	PHILIP WANG	2191	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *17 July 2008*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-47* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-47* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

Detail Action

1. This office action is in response to amendment filed on 7/17/2008.

2. Claims 1-47 are pending.

Specification

3. The disclosure is objected to because it contains an embedded hyperlink and/or other form of browser-executable code. Applicant is required to delete the embedded hyperlink and/or other form of browser-executable code. See MPEP § 608.01. The amended specification includes "the Sun Java website". It appears that "the Sun Java website" refers to a browser link. Further, it is not clear what "the Sun Java website" refers to. Appropriate correction is required.

Claim Objections

4. Claim objection of claims 46 and 47 are withdrawn in view of the Applicant's amendment to the claims.

Claim Rejections - 35 USC § 101

5. Rejections of Claims 1-21 and 47 have been withdrawn in view of the Applicant's amendment to the claims.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 2, 44 and 45 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The above claims include the limitation of "a language other than C#". A language other than C# can be any language other than C# including languages that did not exist at the time of invention. It appears that the applicant's invention is only capable of performing translation of data types from a first language to a second language known to the applicant at the time of invention.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 1, 3-5, 7-22, 24-27, 29-43, 46 and 47 are rejected under 35 U.S.C. 102(b) as being anticipated by Kanamori (US Patent No. 6,167,565).

As per claim 1,

Kanamori discloses

A system for translation of data types between a first application in a first language and a second application in a second language, the system comprising (c3:64-c4:49):

- A computer having at least one processor and a memory (c1:6-8, "…a computer system…");
- a formal mapping between data types of the first language and data types of the second language (for example, c4: 3-6, "…a mapping from a data type in one programming language to a corresponding data type in another programming language…");
- translators for translating data types between the first language and the second language based on the formal mapping; a translation mapping to the translators based on actual data types of the first application and formal data types of the second application (c4:6-9, "This mapping specifies custom marshaling code…that can be used for converting…data type to …the corresponding data type…"");and
- a module for automatically selecting an appropriate translator for translating between a particular data type in the first language and a data type in the second language based on the translation mapping in response to invocation of a method of the first application with the particular data type (c3: 65-c4:2, "…customer marshaling of parameters during invocations…"; for example, c4:17-20, "…the translator invokes the custom marshaling code to convert…" where the conversion of data types is by executing code, and therefore considered automatically.).

As per claim 3,

the rejection of claim 1 is incorporated,

Kanamori discloses

- wherein the formal mapping comprises a mapping between formal types of the first language and formal types of the second language (c4: 6-9, "...mapping from a data type...to a corresponding data type...").

As per claim 4,

the rejection of claim 3 is incorporated,

Kanamori discloses

- wherein the formal types comprise static types (c10: 26, where a static type is shown.).

As per claim 5,

the rejection of claim 1 is incorporated,

Kanamori discloses

- wherein the formal mapping comprises a many-to-one mapping (for example c4, Table 1, first and third rows where both [in]COMTYPE and [in]COMTYPE* map to JAVATYPE).

As per claim 7,

the rejection of claim 1 is incorporated,

Kanamori discloses

- wherein the translators read data of a first type and write data of a second type (c4:64-c4:49).

As per claim 8,

the rejection of claim 1 is incorporated,

Kanamori discloses

- wherein the translators include a mechanism for determining the actual type in the first language that a particular translator supports (c4: 45-46, "…determines whether customer marshaling has been defined for any of the parameters...").

As per claim 9,

the rejection of claim 1 is incorporated,

Kanamori discloses

- wherein the translators include a mechanism for determining the formal type in the second language that a particular translator supports (see Table 1).

As per claim 10,

the rejection of claim 1 is incorporated,

Kanamori discloses

- wherein the translators provide information needed for creating the translation mapping (c4:3-10, "The custom marshaling system…provide to the translator a mapping...").

As per claim 11,

the rejection of claim 1 is incorporated,

Kanamori discloses

- wherein the translators translate return values received from the second application into a format appropriate for the first application (c4:17-20, "…Upon returning from the function,…convert the formal parameter back into the data type of the actual parameter.").

As per claim 12,

the rejection of claim 1 is incorporated,

Kanamori discloses

- wherein the translation mapping provides for navigation from an object of the first application to a formal type of the second application's environment(see Table 1 for example).

As per claim 13,

the rejection of claim 1 is incorporated,

Kanamori discloses

- wherein the translation mapping comprises a mapping from actual type of the first application and formal type of the second application to a particular translator (c4: 6-9, "This mapping specifies custom marshaling code...that can be used for converting parameter of the data type to a parameter of the corresponding data type, and vice versa.").

As per claim 14,

the rejection of claim 1 is incorporated,

Kanamori discloses

- wherein the module for selecting an appropriate translator performs a two level lookup in the translation mapping (c4: 6-16, "This mapping specifies custom marshaling code...that can be used for converting parameter of the data type to a parameter of the corresponding data type, and vice versa…the translator retrieves the specified custom marshaling code.."; see Table 1 shows two levels: first function name, "Foo", then data type).

As per claim 15,

the rejection of claim 14 is incorporated,

Kanamori discloses

- wherein the two level lookup includes a first level lookup based on actual data type of the first application(see Table 1).

As per claim 16,

the rejection of claim 15 is incorporated,

Kanamori discloses

- wherein the first level lookup considers inheritance hierarchy of the actual type(see Table 1).

As per claim 17,

the rejection of claim 14 is incorporated,

Kanamori discloses

- wherein the two level lookup includes a second level lookup based on formal data type of the second application (c4: 6-16, "This mapping specifies custom marshaling code...that can be used for converting parameter of the data type to a parameter of the corresponding data type, and vice versa…the translator retrieves the specified custom marshaling code."; see Table 1 shows two levels: first function name, "Foo", then data type).

As per claim 18,

the rejection of claim 17 is incorporated,

Kanamori discloses

- wherein the second level lookup selects the appropriate translator from a set of translators determined by the first level lookup (c4: 6-16, "This mapping specifies custom marshaling code...that can be used for converting parameter of the data type to a parameter of the corresponding data type, and vice versa…the translator retrieves the specified custom marshaling code."; see Table 1 shows two levels: first function name, "Foo", then data type).

As per claim 19,

the rejection of claim 1 is incorporated,

Kanamori discloses

- wherein the module for selecting an appropriate translator determines if the mapping includes at least one translator for the particular data type (c4: 6-16, "This mapping specifies custom marshaling code...that can be used for converting parameter of the data type to a parameter of the corresponding data type, and vice versa…the translator retrieves the specified custom marshaling code.";).

As per claim 20,

the rejection of claim 1 is incorporated,

Kanamori discloses

- wherein the module for selecting an appropriate translator determines if the mapping includes at least one translator for interfaces of the particular data type (c4: 6-16, "This mapping specifies custom marshaling code...that can be used for converting parameter of the data type to a parameter of the corresponding data type, and vice versa…the translator retrieves the specified custom marshaling code.";).

As per claim 21,

the rejection of claim 1 is incorporated,

Kanamori discloses

- wherein the module for selecting an appropriate translator determines if the mapping includes at least one translator for base types of the particular data type (c4: 6-16, "This mapping specifies custom marshaling code...that can be used for converting parameter of the data type to a parameter of the corresponding data type, and vice versa…the translator retrieves the specified custom marshaling code.";).

As per claim 22,

Kanamori discloses

A method for translation of data types between a first component in a first language and a second component in a second language, the method comprising (c3:64-c4:49):

- defining a formal mapping between data types of the first language and data types of the second language (for example, c4: 3-6, "…a mapping from a data type in one programming language to a corresponding data type in another programming language…");
- implementing translators based on the formal mapping for translating data types between the first language and the second language (c4:6-9, "This mapping specifies custom marshaling code…that can be used for converting…data type to …the corresponding data type…"");
- producing a programming interface for the first component based upon the formal mapping and the second component's programming interface; generating

a translation mapping to the translators based on actual data types of the first component and formal data types of the second component as defined in the first component's programming interface (c4:25-49, where example based on C++ COM and Java VM is disclosed);

- in response to invocation of a method defined in the first component's programming interface with a particular data type, automatically selecting a translator based on the translation mapping and the particular data type (c3: 65-c4:2, "…customer marshaling of parameters during invocations…"); and translating the particular data type to a data type of the second language using the selected translator (c4: 12- 24, where customer marshaling code is used for converting data types is disclosed; where the conversion of data types is by executing code, and therefore considered automatically.).

As per claim 24,

the rejection of claim 22 is incorporated;

Kanamori discloses

- wherein the first component comprises a first component of an application and the second component comprises a second component of the application(c4:25-65).

As per claim 25,

the rejection of claim 22 is incorporated;

Kanamori discloses

- wherein the first component and the second component operate within a single process(see FIG. 1).

As per claim 26,

the rejection of claim 22 is incorporated;

Kanamori discloses

- wherein the defining step includes defining a mapping between formal types of the first language and formal types of the second language(c4: 2-9).

As per claim 27,

the rejection of claim 22 is incorporated;

Kanamori discloses

- wherein the defining step includes defining a many-to-one mapping (for example c4, Table 1, first and third rows where both [in]COMTYPE and [in]COMTYPE* map to JAVATYPE).

As per claim 29,

the rejection of claim 22 is incorporated;

Kanamori discloses

- wherein the implementing step includes implementing a translator reading data of a first type and writing data of a second type(c4: 2-20).

As per claim 30,

the rejection of claim 22 is incorporated;

Kanamori discloses

- wherein the implementing step includes indicating the actual type in the first language that a particular translator supports(c4:2-20, also see Table 1).

As per claim 31,

the rejection of claim 22 is incorporated;

Kanamori discloses

- wherein the implementing step includes indicating the formal type in the second language that a particular translator supports(c4:2-20, also see Table 1).

As per claim 32,

the rejection of claim 22 is incorporated;

Kanamori discloses

- wherein the generating step includes generating the translation mapping based, at least in part, on information provided by the translators(c4:2-20).

As per claim 33,

the rejection of claim 22 is incorporated;

Kanamori discloses

- wherein the translation mapping provides for navigation from an object of the
- first component to the formal type of the second component's environment (see Table 1 for example).

As per claim 34,

the rejection of claim 22 is incorporated;

Kanamori discloses

- wherein the translation mapping comprises a mapping from actual type of the first component and formal type of the second component to a particular translator(c4:2-64).

As per claim 35,

the rejection of claim 22 is incorporated;

Kanamori discloses

- wherein the selecting step includes performing a two level lookup in the translation mapping (c4: 6-16, "This mapping specifies custom marshaling code...that can be used for converting parameter of the data type to a parameter of the corresponding data type, and vice versa…the translator retrieves the specified custom marshaling code.."; see Table 1 shows two levels: first function name, "Foo", then data type).

.

As per claim 36,

the rejection of claim 35 is incorporated;

Kanamori discloses

- wherein the two level lookup includes a first level lookup based on actual data type of the first component (c4: 6-16, "This mapping specifies

custom marshaling code...that can be used for converting parameter of the data type to a parameter of the corresponding data type, and vice versa…the translator retrieves the specified custom marshaling code..";).

.

As per claim 37,

the rejection of claim 36 is incorporated;

Kanamori discloses

- wherein the first level lookup considers inheritance hierarchy of the actual type(c4: 6-16, "This mapping specifies custom marshaling code...that can be used for converting parameter of the data type to a parameter of the corresponding data type, and vice versa…the translator retrieves the specified custom marshaling code.."; see Table 1 shows two levels: first function name, "Foo", then data type).

.

As per claim 38,

the rejection of claim 35 is incorporated;

Kanamori discloses

- wherein the two level lookup includes a second level lookup based on formal data type of the second component(c4: 6-16, "This mapping specifies custom marshaling code...that can be used for converting parameter of the data type to a parameter of the

corresponding data type, and vice versa…the translator retrieves the specified custom marshaling code.."; see Table 1 shows two levels: first function name, "Foo", then data type).

.

As per claim 39,

the rejection of claim 38 is incorporated;

Kanamori discloses

- wherein the second level lookup includes selecting a translator from a set of translators determined by the first level lookup based on formal data type (c4: 6-16, "This mapping specifies custom marshaling code...that can be used for converting parameter of the data type to a parameter of the corresponding data type, and vice versa…the translator retrieves the specified custom marshaling code.."; see Table 1 shows two levels: first function name, "Foo", then data type).

As per claim 40,

the rejection of claim 22 is incorporated;

Kanamori discloses

- wherein the selecting step includes determining if the translation mapping includes at least one translator for the particular data type(c4:1-20).

As per claim 41,

the rejection of claim 22 is incorporated;

Kanamori discloses

- wherein the selecting step includes determining if the translation mapping includes at least one translator for interfaces of the particular data type(c4:2-64).

As per claim 42,

the rejection of claim 22 is incorporated;

Kanamori discloses

- the selecting step includes determining if the translation mapping includes at least one translator for base types of the particular data type(c4:64).

As per claim 43,

The rejection of claim 22 is incorporated;

Kanamori discloses

- translating return values received from the second component
- into a data type of the first component's environment using the selected translator(c4:17-20, "…Upon returning from the function,…convert the formal parameter back into the data type of the actual parameter.").

As per claim 46, it claims similar limitation as method claim 22 and is rejected for similar reason set forth in connection of the rejection of claim 22 above.

As per claim 47, it claims similar limitation as method claim 22 and is rejected for similar same reason set forth in connection of the rejection of claim 22 above.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

8. Claims 2, 44 and 45 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kanamori (US Patent No. 6,167,565) in view of Vargas (US PGPub. No. 2004/0103405).

As per claim 2,

the rejection of claim 1 is incorporated,

- the second language comprises a langage other than C# (c2 46-47, "Java programming language...") .

Kanamori does not specifically disclose

- the first language comprises C#.

However, Vargas discloses

- the first language comprises C#([0006], "...C#...") .

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the teachings of Vargas into the teachings of Kanamori to

include the limitation discloses by Vargas . The modification would be obvious to one of ordinary skill in the art to want to minimize the differences between programming languages as suggested by Vargas ([0013]).

As per claim 44,

the rejection of claim 22 is incorporated,

- the second language is a language other than C# (c2 46-47, "Java programming language...") .

Kanamori does not specifically disclose

- the first language comprises C#.

However, Vargas discloses

- the first language comprises C#([0006], "...C#...") .

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the teachings of Vargas into the teachings of Kanamori to include the limitation discloses by Vargas . The modification would be obvious to one of ordinary skill in the art to want to minimize the differences between programming languages as suggested by Vargas ([0013]).

As per claim 45,

the rejection of claim 22 is incorporated,

- the first language is a language other than C#(c2 46-47, "Java programming language...") .

Kanamori does not specifically disclose

- the second language comprises C#.

However, Vargas discloses

- the second language comprises C# ([0006], "…C#...").

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the teachings of Vargas into the teachings of Kanamori to include the limitation discloses by Vargas . The modification would be obvious to one of ordinary skill in the art to want to minimize the differences between programming languages as suggested by Vargas ([0013]).

9. Claims 6, 23, 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kanamori (US Patent No. 6,167,565) in view of Beisiegel et al. (US PGPub. No. 2004/0177360).

As per claim 6,

the rejection of claim 1 is incorporated,

Kanamori does not specifically disclose

- wherein the translators marshal translated data into a wire format for transfer from the first application to the second application across a network.

However, Beisiegel et al. disclose

- wherein the translators marshal translated data into a wire format for transfer from the first application to the second application across a network ([0012], "…conversion to and from an arbitrary native wire data

format…";[0034], "…a networked computing device, is in communication with other networked computing device.).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the teachings of Beisiegel et al. into the teachings of Kanamori to include the limitation discloses by Beisiegel et al. . The modification would be obvious to one of ordinary skill in the art to want to enable cooperating components of an enterprise as suggested by Beisiegel et al. ([0005]).

As per claim 23,

the rejection of claim 22 is incorporated;

Kanamori does not specifically disclose

- wherein the first component comprises an application on a first machine and the second component comprises an application on a second machine.

However, Beisiegel et al. disclose

- wherein the first component comprises an application on a first machine and the second component comprises an application on a second machine([0034], "…a networked computing device, is in communication with other networked computing device.).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the teachings of Beisiegel et al. into the teachings of Kanamori to include the limitation discloses by Beisiegel et al. . The modification would be obvious to one of ordinary skill in the art to want to enable cooperating components of an enterprise as suggested by Beisiegel et al. ([0005]).

As per claim 28,

the rejection of claim 22 is incorporated;

Kanamori does not specifically disclose

- wherein the implementing step includes implementing a translator for marshaling translated data into a wire format for transfer from the first component to the second component across a network.

However, Beisiegel et al. disclose

- wherein the implementing step includes implementing a translator for marshaling translated data into a wire format for transfer from the first component to the second component across a network ([0012], "…conversion to and from an arbitrary native wire data format…"; [0034], "…a networked computing device, is in communication with other networked computing device.).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the teachings of Beisiegel et al. into the teachings of Kanamori to include the limitation discloses by Beisiegel et al. . The modification would be obvious to one of ordinary skill in the art to want to enable cooperating components of an enterprise as suggested by Beisiegel et al. ([0005]).

Response to Amendment

10. Applicant made various arguments that do not appears to be within the scope of the claim language. For example, page 15, bottom, "Applicant's invention provides an automated

mechanism for determining optimal data type..."; page 16, 1st paragraph, "...the system automatically identifies the optimal target data type..." Such arguments are considered out of the scope of the claim language and therefore general allegation. Regarding the argument related to newly amended portion of claim 1, "a module for automatically selecting...", Kanamori, c4:17-20, "...the translator invokes the custom marshaling code to convert..." discloses the conversion of data types is performed by executing code, and therefore considered automatically.

Conclusion

THIS ACTION IS MADE FINAL. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

It is noted that any citation [[s]] to specific, pages, columns, lines, or figures in the prior art references and any interpretation of the references should not be considered to be limiting in

any way. A reference is relevant for all it contains and may be relied upon for all that it would have reasonably suggested to one having ordinary skill in the art. [[See, MPEP 2123]]

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Philip Wang whose telephone number is 571-272-5934. The examiner can normally be reached on Mon - Fri 8:00AM - 4:00PM. Any inquiry of general nature or relating to the status of this application should be directed to the TC2100 Group receptionist: 571-272-2100.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wei Zhen can be reached on 571-272-3708. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Wei Y Zhen/

Supervisory Patent Examiner, Art Unit 2191